# NATIONAL INSTITUTES OF HEALTH

# Clinical Research Training Program for Medical and Dental Students



A PUBLIC-PRIVATE PARTNERSHIP
SUPPORTED JOINTLY BY THE NIH AND A GRANT
TO THE FOUNDATION FOR THE NIH FROM
PFIZER INC



"I cannot imagine a better place to pose a question at a patient's bedside and then to search for the answer in the laboratory."

ANGELA CHANG
David Geffen School of Medicine, University of California, Los Angeles

"AS WE REENGINEER THE CLINICAL RESEARCH ENTERPRISE AT THE NIH, I LOOK TO THE MEDICAL STUDENTS IN A PROGRAM LIKE THE CRTP TO BECOME THE LEADERS WHO WILL RESHAPE AND ENERGIZE OUR NATIONAL VISION FOR CLINICAL RESEARCH IN THE FUTURE."

ELIAS A. ZERHOUNI, M.D. Director, National Institutes of Health

# An environment where you can ask challenging medical questions . . . and get the answers.

The Clinical Research Training Program (CRTP) is a year-long program designed to attract the most creative, research-oriented medical and dental students to the intramural campus of the National Institutes of Health in Bethesda, Maryland. Participants, known as fellows, spend a year engaged in a mentored clinical or translational research project in an area that matches their personal interests and goals.

An individualized program is developed for fellows, who attend clinics, see patients on the wards, and work with a principal investigator in our laboratories on selected clinical research projects. Fellows learn about translational research, that first step from the bench to the bedside and back to the bench; they attend lectures on clinical research; and they participate in an interactive, group learning experience with the members of the class and leading NIH physicians and scientists.

Fellows can remain at NIH for a second year, depending on support of the sponsoring NIH institute, availability of funds, and permission from the student's home institution.

# THE NIH CAMPUS

The intramural campus of the National Institutes of Health is situated on 317 acres in Bethesda, Maryland, on the outskirts of Washington, DC. Over 50 buildings are dedicated to the biomedical research enterprise. The NIH Clinical Center is a 240-bed tertiary care hospital—the largest in the world devoted exclusively to the care of patients on active clinical research protocols and home to inpatient units, day hospitals, and research laboratories. The Clinical Center provides the ideal environment for advancing clinical science as well as providing compassionate and healing patient-care. There are over 1,200 active research protocols at any given time.

# THE ACADEMIC PROGRAM

The emphasis of the academic components of CRTP, in addition to the mentored clinical research experience in clinics and laboratories, is on interactive, small-group learning. Fellows collaborate closely with one another and with leading clinical investigators on the intramural NIH campus.

# SELECTION OF A MENTOR

Prior to a fellow's arrival on campus, the Director of the CRTP helps refine research interests and narrow the range of topics that an individual may pursue over the course of this year-long program. The director assigns each fellow a tutor, who is a senior physician-scientist on campus. The tutor works with the fellow, upon his or her arrival, to identify suitable mentors and laboratories within the fellow's chosen area of interest. Fellows then meet with possible mentors, make a selection in consultation with the tutor and program director, and plan an individualized research program combining clinical protocols and relevant laboratory studies. Students and mentors meet regularly to chart progress, plot investigational strategies, and discuss careers in biomedical research.



"EVEN MORE THAN THE CHANCE TO
WORK IN ANY LAB AT THE NIH, OR THE
YEAR SPENT IN A GREAT CITY, THE HIGHEST POINT OF MY YEAR HAS BEEN THE
OTHER CRIP FELLOWS

WITHOUT A DOUBT I HAVE LEARNED

MORE FROM MY FRIENDS IN THIS PROGRAM ABOUT SCIENCE AND MEDICINE
THAN I EVER ANTICIPATED. I KNOW

THAT I WILL BE IN CLOSE CONTACT WITH
THESE PEOPLE THROUGHOUT MY

CAREER, AS I WILL CERTAINLY CONTINUE
TO BENEFIT FROM THEIR EXPERTISE AND
ADVICE; AND HOPEFULLY, I CAN DO THE
SAME FOR THEM."

**SARAH MATTESON** *Medical College of Georgia* 

"IN CRTP JOURNAL CLUBS I DEVELOPED
MY ABILITY TO EVALUATE CLINICAL
RESEARCH LITERATURE CRITICALLY.
I'VE LEARNED HOW TO DESIGN MY
OWN STUDIES, TO ENSURE THEY ARE
RIGOROUS AND MEANINGFUL."

NATALIE DAILEY (right)
Harvard Medical School
and
DR. RAPHAELA
GOLDBACH-MANSKY

"ONE OF MY PROUDEST ACHIEVEMENTS
AT NIH HAS BEEN HELPING CRTP GET ITS
START AND WATCHING IT GROW. THIS
PROGRAM HAS FULFILLED THE GOAL OF
A GROUP OF CLINICIAN-SCIENTISTS WHO
SAW THE NECESSITY OF CREATING THIS
OPPORTUNITY FOR MEDICAL STUDENTS
TO BECOME INVOLVED IN CLINICAL
RESEARCH EARLY IN THEIR CAREERS."

MICHAEL M. GOTTESMAN, M.D.
Deputy Director for Intramural
Research, NIH

# Learning—and living—clinical research.

# SEMINAR AND JOURNAL CLUB SERIES

Twice a month, CRTP fellows meet with the director of the program, mentors, and tutors for small-group sessions. The textbook-based discussion covers didactic topics related to principles of clinical research. Fellows lead this seminar and journal club, focusing on manuscripts from the contemporary medical literature, which emphasize these principles. These evening gatherings, over an informal meal, are the heart of the CRTP program: they create an opportunity for lively discussion and pursuit of a single topic in great depth. Fellows find that these sessions create a good balance with the more formal, didactic components of the program. CRTP fellows may also join the students in the Howard Hughes Medical Institute (HHMI) scholars program for their regular lecture series. Talks given by HHMI and NIH investigators are followed by dinner and informal discussions on the speaker's educational background, career path, and particular research interests.

# INTRODUCTION TO THE PRINCIPLES AND PRACTICE OF CLINICAL RESEARCH (IPPCR) COURSE

Each IPPCR lecture is offered for one hour, two evenings a week, over a four-month period. Established in 1995, the course introduces a multitude of ethical, legal, scientific, regulatory, and biostatistical issues in clinical research. CRTP fellows attend the lectures, which complement the discussion at the seminar and journal club sessions.

Objectives of IPPCR are: To familiarize fellows with the basic epidemiologic methods involved in clinical research. To discuss the principles involved in the ethics of clinical research, the legal issues involved in clinical research, and the regulations involved in human subjects research, including the role of Internal Review Boards (IRBs) in clinical research. To familiarize fellows with the principles and issues involved in monitoring patient-oriented research, including regulatory requirements and quality assurance. To discuss the infrastructure required in performing clinical research and have an understanding of the steps involved in developing and funding research studies

# YEAR-END PRESENTATIONS

In May of each year, CRTP fellows give formal oral presentations on their clinical research in a special three-day event for tutors, mentors, and medical and scientific members of the NIH community. In addition, CRTP fellows present their clinical research in poster format following a Wednesday Afternoon Lecture—the premier educational series on campus.

# ADDITIONAL TRAINING

CRTP fellows can partake of the NIH's lively intellectual community, as well: The Wednesday Afternoon Lecture Series draws top scientists and Nobel Prize winners to campus from around the world. Clinical Center Grand Rounds address a broad range of clinical research topics by intramural scientists each week. Fellows may also attend meetings and activities of NIH inter-institute interest groups, assemblies of scientists with common research interests. These groups are divided into broad, process-oriented parent groups and smaller, more focused groups centered on particular research models, subjects, or techniques.

Formal courses are offered on campus by the Foundation for Advanced Education in the Sciences, and a number of CRTP fellows attend these classes, most of which are offered in the evenings. Examples include courses in statistics, biotechnology, and immunology. The NIH Clinical Center has additional training opportunities, as well: Principles of Clinical Pharmacology covers what researchers need to know about the clinical pharmacologic aspects of drug development and use. The Ethical and Regulatory Aspects of Clinical Research course is an overview of ethical and regulatory issues in clinical research, designed to provide attendees with the skills to analyze ethical issues confronted in clinical research, and to enable researchers to design protocols that conform to prevailing ethical standards.



"Although I knew I would have an amazing experience at the NIH, my time here has truly exceeded anything I could have imagined. Intellectually, this has been the most stimulating year of my life. I would strongly recommend that every medical student consider this great opportunity."

HARI NADIMINTI University of Miami School of Medicine



"I was able to see basic science research translated on the wards each week during rounds. It was simply amazing. . . ."

PORCIA BRADFORD

Duke University School of Medicine



"THE LABORATORIES AT NIH ARE COLLE-GIAL AND SUPPORTIVE ENVIRONMENTS: OUR MENTORS AT NIH ARE LEADERS IN THEIR FIELDS AND YET DOWN-TO-EARTH."

CHRISTIAN HUNTER, PH.D. (right) Loma Linda University School of Medicine and DR. MARK GLADWIN

"I CAN THINK OF NO BETTER INVESTMENT THAN TRAINING MEDICAL
STUDENTS IN THE PRINCIPLES AND
PRACTICE OF CLINICAL RESEARCH. WE
HAVE DEDICATED CLINICIAN-SCIENTISTS
AS MENTORS TO OUR CRTP FELLOWS,
INDIVIDUALS WHO ARE MAKING
GROUNDBREAKING DISCOVERIES AND
MOVING SCIENTIFIC KNOWLEDGE FROM
THE BENCH TO THE BEDSIDE."

JOHN I. GALLIN, M.D. Director, NIH Clinical Center



THE WASHINGTON MONUMENT Washington, DC

# Mentors to lead you where you want to go.

# ELIGIBILITY

- This program is intended for medical and dental students. Candidates must currently be enrolled in a medical school accredited by the Liaison Committee on Medical Education (LCME) or a dental school that is accredited by the Commission on Dental Accreditation.
- 2. Candidates in M.D./Ph.D. programs are eligible to apply.
- 3. Candidates must have completed a year of clinical rotations prior to starting the program.
- 4. Candidates must be U.S. citizens or permanent residents.

# APPLICATION PROCESS

Applications for CRTP are submitted on-line through the NIH Office of Intramural Training and Education website, which is <a href="www.training.nih.gov/crtp">www.training.nih.gov/crtp</a>. Applications are submitted in early fall for a January 15th deadline. Requirements are:

- A cover letter, including a description of research interests and goals (although prior research experience is not a requirement of CRTP, enthusiasm for and commitment to the objectives of clinical research are highly desirable)
- A curriculum vitae
- Three letters of recommendation, including one from the Office of the Dean authorizing a student's participation in CRTP
- Medical or dental school grades
   The web site also features the research projects of former CRTP participants, alumni listings, and Frequently Asked Questions.

# SELECTION PROCESS

Following a review of all applications, the Board of Tutors for CRTP selects a number of students to be interviewed. Interviews are usually held in March. Decisions are normally communicated to successful candidates within two to three weeks of the interviews. The program begins on July 1 or August 1, depending on the students' rotation schedules at their home schools. CRTP class size was expanded in 2004 to accommodate up to 30 student-fellows per year.

# ACCOMMODATIONS

CRTP is a residential program, and all participants are expected to live in our facilities. Fellows live adjacent to campus in furnished apartments in Bethesda. Two-bedroom, two-bath apartments are leased for fellows, with a few one-bedroom apartments for couples. Buildings are within walking distance of the center of campus.

# THE DC AREA

"Work is hard. Distractions are plentiful. And time is short." - ADAM HOCHSCHILD

"He who cannot rest, cannot work. . . . " - HARRY EMERSON FOSDICK

The national capitol area offers much in the way of entertainment and relaxation. You can spend free time visiting the museums of the Smithsonian Institute, attending performances at the Kennedy Center, exploring battlefields of the American Civil War, cycling or hiking along the C&O Canal's towpath, sailing the Chesapeake Bay, or sitting in on Senate hearings. Bethesda itself is home to some 300 restaurants. The location of the NIH on the Metro subway line means that you can be downtown in 20 to 30 minutes.

# CLINICAL RESEARCH TRAINING PROGRAM Letter from the Director

#### Dear Medical and Dental Students:

Since its inception in 1997, the Clinical Research Training Program (CRTP) has continued to grow and evolve, and we have introduced many exciting modifications. In 2004 CRTP doubled in size — growing from 15 to 30 fellows, thanks to the support of our NIH Director, Dr. Elias Zerhouni and the NIH Roadmap initiative. The Roadmap is an innovative approach to accelerate fundamental biomedical discovery and translate that knowledge into effective prevention strategies and new treatments. The initiatives funded under the NIH Roadmap address critical roadblocks and knowledge gaps that constrain rapid progress in biomedical research and synergize the work of many NIH Institutes and Centers, representing a unique effort of the NIH as a whole. Thus, 30 promising medical and dental students are able to benefit from the opportunity to learn about clinical research here in Bethesda, Maryland.

As program director since 2000, I have developed a format for our seminar and journal club series, which uses a core text in clinical research, along with supplemental information from the contemporary medical literature. Specifically, CRTP fellows lead a discussion of an assigned chapter utilizing slides, handouts, and other teaching aids. Clinical research principles are emphasized. The CRTP fellows also select one or two current journal articles, and they are used in an interactive session to illustrate the research principles in a practical manner.



Another of the unique components of CRTP is clinical teaching rounds, which takes advantage of the rich patient population at the NIH. These rounds are typically held every other week. During this teaching exercise, a patient's medical history is presented; the group examines the patient, with emphasis placed on pertinent physical findings; and the principal investigator of the clinical research protocol in which the patient is enrolled talks to the

Your year at the NIH, regardless of which research projects you pursue, will provide you with a deep understanding of the principles and practice of—and people involved in—clinical research.

group about the patient's underlying disease as well as the details of the protocol. Using this format, the CRTP fellows get to interact with patients who can also provide their own perspectives on clinical research, based on their involvement in a clinical trial. The clinical teaching rounds are held in the NIH Clinical Center. The new NIH hospital, called the Mark O. Hatfield Clinical Research Center, opened in early 2005 and has become home to new inpatient units, day hospitals, and research laboratories.

These program features have been introduced with the support and encouragement of the fellows themselves. Your year at the NIH, regardless of which research projects you pursue, will provide you with a deep understanding of the principles and practice of — and people involved in — clinical research. This is an experience not replicated elsewhere. The CRTP fellows, tutors, staff, and I look forward to meeting you during the interviews for this program, and to working with you during your year at the NIH. I have observed the camaraderic that develops among our fellows, the enduring friendships that have grown out of their participation in CRTP, and invite you to consider becoming a part of this very special clinical research experience. I promise that it will be a life changing and career-enhancing experience.

Sincerely,

Wederick P. Ogribene Frederick P. Ognibene, M.D.

Director, CRTP

# CLINICAL RESEARCH TRAINING PROGRAM Academic Program

"Choosing the Study Subjects: Specification, Sampling, and Recruitment"

"Planning the Measurements: Precision and Accuracy"

"Getting Ready to Estimate Sample Size: Hypotheses and Underlying Principles"

"Estimating Sample Size and Power: The Nitty-gritty"

"Designing an Observational Study: Cohort Studies"

"Designing an Observational Study: Cross-sectional and Case-control Studies"

"Enhancing Causal Inference in Observational Studies"

"Designing an Experiment: Clinical Trials I"

"Designing an Experiment: Clinical Trials II"

"Designing Studies of Medical Tests"

"Research Using Existing Data: Secondary Data Analysis, Ancillary Studies, and Systematic Reviews"

"Addressing Ethical Issues"

"Designing Questionnaires and Data Collection Instruments"

"Data Management"

"Implementing the Study: Pretesting, Quality Control, and Protocol Revisions"

"Community and International Studies"

"Writing and Funding a Research Proposal"

#### SCIENTIFIC PRESENTATIONS

Annual oral presentations at NIH end-of-year forum

Poster presentations at Pfizer Inc

Poster presentations as part of Wednesday Afternoon Lecture Series

# CRTP FELLOWS' RESEARCH TOPICS, 2005 - 2006

Dietary Lipids and Cataracts in the Age-related Eye Disease Study

The LUZEOM Study: Lutein/Zeaxanthin and Omega-3 Supplementation in Persons Over Age 60

Differential Activation and Apoptotic Response of Human Lymphocytes to T-cell Receptor Stimulation Among Non-infectious Uveitis Patients and Controls

Proteomic Identification of Dysregulated Apolipoprotein Expression in Pulmonary Hypertension Secondary to Sickle Cell Disease

Real Time in vivo Proteomic Signaling Profiles of Human Tumors in Response to Hyperthermic Perfusion with Melphalan

Identification of Genes Responsible for Astrocytogenesis from Uncommitted Neural Progenitor Cells

Analysis of IL-7 Receptor Mutations in T-B+ Severe Combined Immunodeficiency (SCID) Patients

Bony Lesions in Patients with Neonatal Onset Multisystem Inflammatory Disease (NOMID)

Rapid Immune Reconstitution and Complete Donor Chimerism After Non-myeloablative Allogeneic Peripheral Blood Stem Cell Transplantation in Pediatric Patients with Malignancy

Free Cortisol May Better Reflect Adrenal Function in Adrenocorticotropic Hormone (ACTH) Stimulation Testing

The Decline and Fall of Post-transfusion Hepatitis

Forkhead Box O-Class (FOXO) Transcription Factors Activate Human Sirtuin 3 (Sir T 3) Gene in Response to Nutrient Deprivation

Investigation of the Polycomb Protein Bmi-1 in Delaying Senescence in Primary Human Melanocytes

Using Stable Cellular Dyes to Label Slowly-cycling Keratinocyte Stem Cells

Exploring the Possible Prognostic Value of microRNA Isolated from Ewing's Sarcoma

Differential Patterns of Protein Expression in Tumors Associated with von Hippel-Lindau Disease

A Longitudinal Evaluation of Disease Progression and Functional Outcome in Fibrous Dysplasia of Bone

Weight Gain in Children at Risk for Adult Obesity: Role of Sleep Duration and Leptin Concentration

Reward Genes and Susceptibility to Obesity

Circulating Endothelial Progenitor Cells, Vascular Function and Cardiovascular Risk in a Sedentary Workforce

Modeling of Endothelial Dysfunction in Humans Post 20-minutes of Forearm Ischemia and Measuring Blood Flow Using Plethysmography: Potential Role of Sodium Nitrite as a Preconditioning Agent to Augment Post Ischemic Vascular Recovery

Thrombolysis in Acute Stroke in the 3 to 24 Hour Window

Reduced Bone Mineral Density and Minimal Trauma Fractures in Hyper IgE Syndrome

Expression of BAGs 1,3,4, and 6 in the NCI 60 Cell Line Screen: A New Family of Putative Molecular Targets

The Role of Activated NF- B in the Pathogenesis and Therapy of Squamous Cell Carcinoma of the Head and Neck

Investigating the Anti-angiogenic Potential of MEK Inhibition in Thoracic Cancers

Pulsed-high Intensity Focused Ultrasound Mediated Delivery: Non-invasively Enhancing Targeting and Efficacy of Therapeutic Agents

Intraoperative Infrared Imaging to Aid in Identification of Anatomic Structures and Detection of Ischemia

Hypoxia Effect on Non-malignant Prostatic Urethra During Prostatectomy

Candidate Gene Screening for Primary Open Angle Glaucoma (POAG)

# CLINICAL RESEARCH TRAINING PROGRAM Fellows and Alumni

2006 - 2007

Yachna Ahuja

Case Western Reserve University School of Medicine

Candice J. Bereal

David Geffen School of Medicine, UCLA

Elizabeth S. Burney

Duke University School of Medicine

Jeong W. Choi

State University of New York -Brooklyn School of Medicine

Jason A. Clark

Duke University School of Medicine

Dana D. Crum

UMDNJ-Robert Wood Johnson Medical School

Andrew P. Demidowich

UMDNJ-Robert Wood Johnson Medical School

Amit S. Dhamoon

State University of New York (SUNY) at Syracuse

School of Medicine

Brandi K. Freeman

Baylor College of Medicine

Robert M. Havward

Duke University School of Medicine

James E. Head

Duke University School of Medicine

**Ieffrey I. Helgager** 

Duke University School of Medicine

Joshua J. Joseph

Boston University School of Medicine

Joohee Lee

UMDNJ-New Jersey Medical School

Anna O. Likhacheva

University of Arizona School of Medicine

Iack I. Liu

David Geffen School of Medicine, UCLA

Kit Lu

Florida State University College of Medicine

Ianav E. Mckie

Duke University School of Medicine

Mark V. Mishra

University of Cincinnati College of Medicine

Pretesh R. Patel

Duke University School of Medicine

Tara Rao

New York University School of Medicine

Geoffrey M. Rau

Duke University School of Medicine

**Eunice H. Rhee** 

UMDNJ-Robert Wood Johnson Medical School

**Kunal Saigal** 

University of Miami School of Medicine

Thai Lan N. Tran

University of Vermont School of Medicine

Keli M. Turner

Vanderbilt University School of Medicine

Amit V. Vora

UMDNJ-Robert Wood Johnson Medical School

Jennifer A. Warner

Johns Hopkins University School of Medicine

Kristin A. Weeks

University of Kentucky College of Medicine

**Omair Yousuf** 

University of Missouri-Kansas City School of Medicine

2005 - 2006

Ezinma Achebe

4th year, UMDNJ- Robert Wood Johnson Medical School

Mehrdad Alemozaffar

4th year, David Geffen School of Medicine, UCLA

Clint T. Allen

4th year, Texas A&M University System Health Science Center College of Medicine

Elizabeth M. Azzato, M.P.H.\*\*

Duke University School of Medicine

Adam M. Berg

4th year, George Washington University School of Medicine and Health Sciences

Lan Chang

4th year, University of Michigan Medical School

Joshua G. Cohen

4th year, Northwestern University, Feinberg School of Medicine

Seth A. Cohen

4th year, Northwestern University, Feinberg School of Medicine

Obinna C. Emechebe-Kennedy, Pharm.D.

4th year, University of Illinois-Chicago School of Medicine

Abby F. Fleisch

4th year, Northwestern University, Feinberg School of Medicine

Charles F. Haines

4th year, Duke University School of Medicine

Elizabeth S. Hart, M.D.

Case Western Reserve University/University Hospitals of Cleveland (Pediatrics); M.D. University of Pennsylvania School of Medicine

Lynn Huang, M.P.H.

4th year, David Geffen School of Medicine, UCLA

Frank S. Hwang

4th year, Mount Sinai School of Medicine

John Josephson

4th year, UMDNJ- Robert Wood Johnson Medical School

Lyndon B. Lee

4th year, University of Alabama School of Medicine

Jennifer C. Ling

4th year, Ohio State University College of Medicine

Margaret F. Lippincott

4th year, Duke University School of Medicine

Gerhard S. Mundinger

4th year, Johns Hopkins University School of Medicine

Madjimbave C. Namde

4th year, Duke University School of Medicine

Veronique R. Nussenblatt, M.H.S.

4th year, University of Maryland School of Medicine

Alison R. Rager

4th year, Duke University School of Medicine

Richard A. Robison

4th year, Washington University School of Medicine

Ritchie O. Rosso, M.D.

Preliminary Year in Internal Medicine at St. Lukes Roosevelt Hospital Center; University of Miami Leonard M. Miller School of Medicine/Jackson Memorial Hospital (Dermatology); M.D., University of Virginia School of Medicine

Shailen S. Sehgal

4th year, Joan & Sanford I. Weill Medical College of Cornell University

Bryan J. Traughber\*

David Geffen School of Medicine, UCLA

Amy R. Tso\*

David Geffen School of Medicine, UCLA

Ashaunta R. Tumblin

4th year, Harvard Medical School

Matthew W. Wade

4th year, George Washington University School of Medicine and Health Sciences

Tony J. Wang

4th year, University of Missouri-Kansas City School of Medicine

2004 - 2005

Robert D. Allison, M.D., M.P.H.

Returning to the NIH as an investigator with the Department of Transfusion Medicine, NIH Clinical Center;

M.D., Florida State University College of Medicine

Priya Batra, M.D.

Preliminary Year in Internal Medicine at Mount Sinai Medical Center;

New York University School of Medicine (Dermatology); M.D., Duke University School of Medicine

Ebony A. Boyce, M.D., M.P.H.

Brigham and Women's Hospital (Obstetrics and Gynecology), M.D., Duke University School of Medicine

Scott W. Canna, M.D.

University of Colorado (Pediatrics);

M.D., George Washington University School of Medicine and Health Sciences

Mailan M. Cao, M.D.

Preliminary Year in Internal Medicine at Olive View/UCLA Medical Center; University of California, Los Angeles Medical Center (Radiology);

M.D., David Geffen School of Medicine, UCLA

Carolee M. Cutler, M.D.

University of Utah (Plastic Surgery);

M.D., University of Utah School of Medicine

Arpi Doshi, M.D.

University of Pennsylvania Health System (Radiation Oncology); M.D., University of Michigan Medical School

Prateek C. Gandiga, M.D.

Washington University/Barnes Jewish Hospital/St. Louis Children's Hospital Consortium (Internal Medicine); M.D., UMDNJ-Robert Wood Johnson Medical School

Nabeel Hamoui, M.D.

McGaw Medical Center of Northwestern University (Urology/General Surgery);

M.D., Duke University School of Medicine

Rebecca E. Hommer, M.D.

Yale-New Haven Medical Center

(Integrated Child, Adolescent and Adult Psychiatry);

M.D., University of Pennsylvania School of Medicine

Samer H. Jaber, M.D.

Preliminary Year in Internal Medicine at St. Vincent's Hospital; University of Rochester (Dermatology);

M.D., Vanderbilt University School of Medicine

Edward W. Jung, M.D.

Preliminary Year in Internal Medicine at the Washington (DC) Hospital Center; New York University School of Medicine (Radiology);

M.D., Brown Medical School

Stefan S. Kachala\*

4th year, UMDNJ-Robert Wood Johnson Medical School

Chris E. Keh, M.D.

University of Chicago Hospitals (Internal Medicine); M.D., University of Illinois College of Medicine

#### Richard D. Kim, M.D.

University of Washington (Internal Medicine);

M.D., University of California, San Francisco School of Medicine

#### Arash Koochek, M.D., M.P.H.

Preliminary Year in Internal Medicine at the University of California, San Diego; Yale-New Haven Medical Center (Dermatology);

M.D., University of Vermont College of Medicine

#### Meghan S. Liel, M.D.

Oregon Health & Science University (Internal Medicine);

M.D., Duke University School of Medicine

#### Elaina E. Lin, M.D.

Johns Hopkins University (Anesthesiology);

M.D., Johns Hopkins University School of Medicine

#### Brieanne V. Midura, M.D.

Children's Hospital/Boston Medical Center (Pediatrics); M.D., George Washington University School of Medicine and Health Sciences

## Douglas B. Mogul, M.D.

Stanford University (Pediatrics);

M.D., Albert Einstein College of Medicine of Yeshiva University

#### Stacy D. O'Connor, M.D.

Transitional year at Lehigh Valley Hospital/Pennsylvania State University; University of Wisconsin (Radiology);

M.D., Mount Sinai School of Medicine of New York University

# Sinae T. Park, M.D.

UMDNJ-Robert Wood Johnson Medical School (General Surgery), M.D., Columbia University College of Physicians and Surgeons

#### Candace Y. Parker, M.D.

University of Pennsylvania Health System (Obstetrics and Gynecology);

M.D., Bowman Gray School of Medicine

## Tien Peng, M.D.

New York-Presbyterian Hospital (Columbia) (Internal Medicine); M.D., Johns Hopkins University School of Medicine

# Julie M. Rosenthal, M.D.

Wills Eye Hospital (Ophthalmology);

M.D., University of Pennsylvania School of Medicine

#### Dave A. Roy, M.D.

University of Texas Southwestern Medical School Program; (Diagnostic Radiology);

M.D., University of Alabama School of Medicine

#### Oscar K. Serrano, M.D.

Johns Hopkins University (General Surgery);

M.D., Stanford University School of Medicine

#### Erica D. Taylor, M.D.

University of Virginia (Orthopedic Surgery); M.D., Duke University School of Medicine

#### Rohan C. Wijewickrama, M.D.

Wake Forest University School of Medicine (General Surgery); M.D., Bowman Gray School of Medicine

#### Susan Yuditskava, M.D.

Preliminary year in Internal Medicine at the University of Pittsburgh Medical Center; New York-Presbyterian Hospital (Columbia) (Anesthesiology);

M.D., University of Pittsburgh School of Medicine

#### 2003 - 2004

#### Porcia T. Bradford, M.D.

Vanderbilt University Medical Center (General Surgery); M.D., Duke University School of Medicine

### Cesar M. Castro, M.D.

University of California, San Francisco Medical Center (Internal Medicine);

M.D., University of California, San Francisco School of Medicine

### Angela A. Chang, M.D.

University of California, San Diego Medical Center (Otolaryngology);

M.D., David Geffen School of Medicine, UCLA

#### Natalie J. Dailey, M.D.

Baylor College of Medicine (Medicine-Pediatrics);

M.D., Harvard Medical School

#### Joshua S. Easter, M.D.

Beth Israel Deaconess Medical Center (Emergency Medicine);

M.D., Duke University School of Medicine

#### Tristan Gorrindo, M.D.

Massachusetts General Hospital (Pediatrics and

Adult/Child Psychiatry);

M.D., Vanderbilt University School of Medicine

### Christian J. Hunter, M.D., Ph. D.

Brigham and Women's Hospital (Internal Medicine);

M.D., Loma Linda University School of Medicine

#### Doris G. Leung, M.D.

Stanford University Hospital (Neurology);

M.D., Duke University School of Medicine

#### Sarah K. Matteson, M.D.

University of Pennsylvania Health System (Neurology); M.D., Medical College of Georgia

#### Hari Nadiminti, M.D.

New York-Presbyterian Hospital (Cornell) (Dermatology);

M.D., University of Miami School of Medicine

#### Mark A. Naftanel, M.D.

University of Michigan Hospitals and Health

Centers (Dermatology);

M.D., Duke University School of Medicine

#### Lauren M. Nentwich, M.D.

Boston Medical Center (Emergency Medicine); M.D., Harvard Medical School

#### Anne-Caroline M. Norman

4th year, Duke University School of Medicine; M.B.A., Duke University, The Fuqua School of Business

## Timothy W. Vogel, M.D.

University of Iowa Hospitals and Clinics (Neurological Surgery), M.D., Columbia University College of Physicians and Surgeons

## Dana J. Wallace, M.D.

Duke University Medical Center (Ophthalmology); M.D., Duke University School of Medicine

#### 2002 - 2003

# Paul A. Berry, M.D.

Texas A&M College of Medicine-Scott and White Memorial Hospital (Plastic Surgery);

# M.D., Washington University School of Medicine **Deb A. Bhowmick, M.D.**

University of Pennsylvania Health System (Neurological Surgery); M.D., Baylor College of Medicine

#### Daniel J. Canter, M.D.

University of Pennsylvania Health System (Urology); M.D., George Washington University School of Medicine and Health Sciences

#### Marc L. Cohen, M.D.

University of Pennsylvania Health System (Internal Medicine), M.D., University of Pennsylvania School of Medicine

### Kristin M. Dittmar, M.D.

University of California at Los Angeles Medical Center (Diagnostic Radiology);

M.D., University of South Florida College of Medicine

#### Claire E. Farel, M.D.

Brigham and Women's Hospital (Internal Medicine); M.D., University of North Carolina at Chapel Hill School of Medicine

#### Colleen Harkins, M.D.

University of Utah Medical Center (Pediatrics); M.D., University of Pennsylvania School of Medicine

#### Yelena L. Kogan, M.D.

University of Virginia Medical Center (Internal Medicine); M.D., Duke University School of Medicine

#### Michelle W. Lau, M.D.

Washington University/Barnes-Jewish Hospital (Internal Medicine), M.D., Duke University School of Medicine

# Lynn T. Matthews, M.D.

Brigham and Women's Hospital (Internal Medicine); M.D., University of Miami School of Medicine

#### Alex Natanzon, M.D.

Mount Sinai School of Medicine (Internal Medicine); M.D., Mount Sinai School of Medicine of New York University

### Jeremy J. Parris, M.D.

Medical University of South Carolina Medical Center (General Surgery);

M.D., Emory University School of Medicine

#### Jonathan J. Paul, M.D.

University of Chicago Hospitals (Internal Medicine); M.D., Emory University School of Medicine

# Tiffany M. Powell, M.D., M.P.H.

Brigham and Women's Hospital (Internal Medicine); M.D., Duke University School of Medicine

## Jeffrey M. Venstrom, M.D.

Memorial Sloan-Kettering Cancer Center (Medical Oncology Fellowship)

Johns Hopkins Hospital (Internal Medicine);

M.D., Vanderbilt University School of Medicine

# Scott D. Wait, M.D.

Barrow Neurological Institute of St. Joseph's Hospital and Medical Center (Neurological Surgery); M.D., East Carolina University School of Medicine

<sup>\*</sup>Participated in CRTP for a second year

<sup>\*\*</sup>Participating in the NIH-Cambridge University Graduate Partnerships Program (GPP) after CRTP year

# CLINICAL RESEARCH TRAINING PROGRAM Benefits

Stipend (12 months, taxable) \$29,400

One FAES course per semester,

tuition and books paid \$1,000 maximum for the year

Book allowance \$250

Paid health insurance

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Computer allowance \$1,200

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Lectures and dinners with Howard Hughes Medical Institute Scholars

Annual visit to research laboratories of Pfizer Inc (subject to confirmation)





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